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TITLE: Method for the detection of an analyte by means of a nucleic acid reporter

CLAIMS:

12. A method for the detection of a non-nucleic acid analyte comprising: (i) immobilizing at least one non-nucleic acid analyte on a solid support, said analyte having at least two reporter conjugate binding sites; (ii) contacting said analyte with at least one reporter conjugate pair, said reporter conjugate pair comprising a first reporter conjugate and a second reporter conjugate, each of said first and second reporter conjugates further comprising: a) one member of a binding pair having an affinity for at least one reporter conjugate binding site on said analyte; b) a nucleic acid label; wherein said nucleic acid label of said first reporter conjugate comprises a 3' hydroxyl group and wherein said nucleic acid label of said second reporter conjugate comprises a 5' phosphoryl group and wherein said analyte binds to said reporter conjugate forming an analyte dependent reporter complex; (iii) contacting said analyte dependent reporter complex with a DNA ligase, wherein said first and second nucleic acid labels are ligated to form an analyte specific amplicon; (iv) contacting said analyte specific amplicon with a replication composition wherein said amplicon is amplified forming amplification products; and (v) detecting said amplification products.

21. A method for the detection of a non-nucleic acid analyte comprising: (i) contacting at least one non-nucleic acid analyte with at least one reporter conjugate pair, said reporter conjugate pair comprising a first reporter conjugate and a second reporter conjugate, each of said first and second reported conjugates further comprising: a) one member of a binding pair having an affinity for at least one reporter conjugate binding site on said analyte; b) a nucleic acid label; wherein said nucleic acid label of said first reporter conjugate comprises a 3' hydroxyl group and wherein said nucleic acid label of said second reporter conjugate comprises a 5' phosphoryl group and wherein said analyte binds to said reporter conjugate forming an analyte dependent reporter complex; (ii) contacting said analyte dependent reporter complex with a DNA ligase; wherein said first and second nucleic acid labels are ligated to form an analyte dependent amplicon; (iii) contacting said analyte specific amplicon with a replication composition wherein said amplicon is amplified forming amplification products; and (iv) detecting said amplification products.

26. A method for the detection of a nucleic acid analyte comprising: (i) contacting at least one nucleic analyte having at least two reporter conjugate binding sites with at least two reporter conjugates, said reporter conjugates each comprising: a) one member of a binding pair having specificity for at least one reporter conjugate binding site on said analyte, the one member of a binding pair selected from the group consisting of an antigen, antibody, biotin, streptavidin, avidin, folic acid, folate binding protein, protein A protein G, immunoglobulins, epoxide, malaimide and sulfhydryl reactive groups; b) a nucleic acid label; wherein said analyte binds to said reporter conjugates forming an analyte dependent reporter complex; (ii) contacting said analyte dependent reporter complex with a enzyme composition wherein the nucleic acid labels on said reporter conjugates are joined to form an analyte specific amplicon; (iii) contacting the analyte specific amplicon with

an replication composition wherein amplification products are produced; and (iv) detecting said amplification products.